



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

10

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,723	07/14/2003	Isamu Ilzuka	024536-0130	4201

22428 7590 03/11/2005

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

HOANG, JOHNNY H

ART UNIT PAPER NUMBER

3747

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8W

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/617,723	ILZUKA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Johnny H. Hoang	3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Response to amendment***

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawasaki et al (US 6,412,458 B2).

Regarding claim 1, the reference of Kawasaki et al discloses the valve timing control for engine which including the following subject matters:

a valve operating characteristic detecting unit that detects a valve operating characteristic which is varied by said variable valve mechanism (col. 2, line 51 through col. 3, line 28, and abstract);

an actual intake air amount measuring unit that measures an actual intake air amount of said engine (as above discussion); and

a residual gas amount calculating unit that calculates a valve opening area at a valve overlap time based on detected valve operating characteristic, and calculates a residual gas amount of the engine based on calculated valve opening area and said actual intake air amount of the engine (above discussions and Figs. 5-10).

Regarding claim 2, as discussed in claim 1.

Regarding claim 3, as above discussions, the reference of Kawasaki et al further teaches:

Art Unit: 3747

calculates a spit-back gas amount at the valve overlap time based on said valve opening area at the valve overlap time (col. 6, lines 33-54), and

sets a resultant obtained by adding calculated spit-back gas amount at the valve overlap time to said basic residual gas amount, as said residual gas amount of the engine (col. 6, line 55 through col. 7, line 62).

Regarding claims 4-6, as above discussions.

Regarding claim 7, as above discussions and see col. 3, line 63 through col. 4, line 45 for more details.

Regarding claims 8-12, as above rejections.

Regarding claims 13-23, as discussed in the apparatus of claims 1-12.

Regarding claims 24-35, as rejected in claims 1-12.

Regarding claims 36-48, as above rejections.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-48 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnny H. Hoang whose telephone number is (571) 272-4843. The examiner can normally be reached on Monday - Thursday (7:00Am-5: 30Pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3747

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHH  
March 5, 2005

Johnny H. Hoang  
Examiner  
Art Unit 3747

*Tony M. Argenbright*  
**Tony M. Argenbright**  
**Primary Examiner**  
**Art Unit 3747**